AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (original) A trip system for a circuit breaker, comprising:

a support frame;

a trip unit responsive to an electric current for generating a trip force;

a crossbar directly coupled to the trip unit with a degree of freedom therebetween, and directly coupled to the support frame with a degree of freedom therebetween; and

a trip bar directly coupled to the support frame with a degree of freedom therebetween, and responsive to the trip force generated at the trip unit;

wherein an electric current at the trip unit generates a trip force that acts upon the trip bar to trip the circuit breaker, the crossbar remaining substantially stationary during the tripping action.

2. (original) The system of Claim 1, wherein the trip bar comprises a secondary latch arranged to interact with a primary latch for tripping the circuit breaker.

3. (original) The system of Claim 1, wherein the crossbar comprises a trip level adjuster for adjusting a first air gap at the trip unit for adjusting the responsiveness of the trip unit with respect to the electric current.

4. (currently amended) The system of Claim 3, wherein the trip unit comprises:

a tripping member having a first end responsive to the electric current and a second end having an actuator for interacting with the trip bar through a second air gap,

the actuator being adjustable for adjusting the second air gap for adjusting a trip stroke of the tripping member, the tripping member being biased in a first direction ~~that tends to increase~~ so as to maximize the second air gap.

5. (original) The system of Claim 4, wherein the trip level adjuster is arranged to adjust both the first air gap and the second air gap, and the adjustable actuator is arranged to adjust only the second air gap.

6. (original) The system of Claim 4, wherein the trip unit further comprises:

a trip coil responsive to the electric current for generating a magnetic flux; and

a flux path arranged proximate the trip coil having a stationary pole face;

wherein the first end of the tripping member is movably arranged at the trip coil and has a movable pole face;

wherein the first air gap is disposed between the stationary and movable pole faces.

7. (original) The system of Claim 4, wherein the trip unit further comprises:

a cage coupled to the crossbar with a degree of freedom therebetween, coupled to the tripping member with a degree of freedom therebetween, and coupled to the actuator with a degree of freedom therebetween; and

a bias spring for biasing the tripping member in the first direction, the bias spring being disposed between the actuator and the cage.

8. (original) The system of Claim 7, wherein the second end of the tripping member and the actuator and threadably engaged, thereby enabling the actuator to move relative to the tripping member and relative to the cage in response to the tripping member being rotated.

9. (original) The system of Claim 6, wherein the circuit breaker trips prior to the movable pole face seating against the stationary pole face.

10. (original) A method for adjusting the responsiveness of a magnetic trip unit of a circuit breaker, comprising:

adjusting both a first and a second air gap in unison, the first air gap effecting the responsiveness of the trip unit to an electric current, the second air gap effecting a trip stroke of the trip unit;

adjusting the second air gap while maintaining the first air gap constant; and

fixing the second air gap to be constant.

11. (original) The method of Claim 10, further comprising:

adjusting the second air gap to be less than the first air gap.

12. (original) The method of Claim 11, wherein:

the adjusting both a first and a second air gap comprises rotating a trip level adjuster; and

the adjusting the second air gap comprises rotating a tripping member.

13. (original) A magnetic trip system for a circuit breaker, comprising:

a support frame;

a crossbar pivotally arranged at the support frame and having a first adjuster for adjusting a first air gap;

a trip bar pivotally arranged at the support frame;

a magnetic trip unit coupled to the crossbar with a degree of freedom therebetween; and

a second air gap disposed between the magnetic trip unit and the trip bar;

wherein the magnetic trip unit includes the first air gap and a second adjuster for adjusting the second air gap.

14. (original) The system of Claim 13, wherein the magnetic trip unit comprises:

a coil accepting of an electric current and generating a magnetic flux in response thereto;

a flux path proximate the coil and having a stationary pole face; and

a plunger having a movable pole face at a first end thereof, the movable pole face disposed proximate the stationary pole face;

wherein the first air gap is disposed between the stationary pole face and the movable pole face;

wherein the dimension of the first air gap is responsive to adjustment of the first adjuster.

15. (original) The system of Claim 13, wherein the magnetic trip unit comprises:

a plunger having an actuator adjustably arranged at a second end thereof, thereby providing the second adjuster;

a cage coupled at one end to the plunger with a degree of freedom therebetween and coupled at the opposite end to the crossbar with a degree of freedom therebetween; and

a bias spring disposed between the actuator and the cage;

wherein the actuator is coupled to the cage with a degree of freedom therebetween;

wherein the second air gap is disposed between the actuator and the trip bar;

wherein the dimension of the second air gap is responsive to adjustment of the second adjuster.

16. (new) The system of Claim 1, wherein:

the crossbar comprises a trip level adjuster for adjusting a first air gap at the trip unit for adjusting the responsiveness of the trip unit with respect to the electric current;

the trip unit comprises an adjustable actuator for adjusting a second air gap for adjusting a trip stroke of the trip unit;

the trip level adjuster being arranged to adjust both the first air gap and the second air gap, and the adjustable actuator being arranged to adjust only the second air gap.